

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the outstanding grounds of rejection is respectfully requested in light of the above amendments and the remarks that follow.

At the outset, applicant gratefully acknowledges the Examiner's indication that claims 12-17 have been allowed, and that claims 9 and 10 are merely objected to.

By this response, claim 9 has been rewritten in independent form, thereby placing claims 9 and 10 in condition for allowance along with claims 12 and 17.

The Examiner has rejected claim 1 under 35 U.S.C. 102(b) as anticipated by Beristain (U.S. 5,530,029). In rejecting the claim, the Examiner takes the position that the diaphragm 24 of Beristain is "constructed of a nickel-based alloy with a noble metal plating (gold being interpreted as a noble metal) on an exposed side thereof," citing Column 7, lines 31-42.

It is respectfully submitted that the Examiner has misinterpreted the disclosure in Beristain. In the paragraph specifically cited by the Examiner, the reference states:

Once the field assisted bonding process is completed, a portion of the outer periphery of the device is etched away in order to expose part of the electrode 14 so that an external connection may easily be made. A conductive metal layer or pad of nickel, gold, aluminum, etc., may then be deposited and alloyed on the external surface of the diaphragm 24 to provide electrical connection.

Thus, Beristain does indeed suggest that a layer of gold may be applied on the external surface of the diaphragm 24. Independent claim 1, however, requires that the diaphragm be constructed of a nickel-based alloy. In Beristain, diaphragm 24 is expressly disclosed as being a doped silicon diaphragm (see Column 6, line 46).

Accordingly, the subject matter of independent claim 1 is neither disclosed nor suggested in Beristain.

The Examiner has rejected claims 6-8 under 35 U.S.C. 103 as unpatentable over Beristain.

With regard to these claims, the Examiner contends that the specific thickness limitations would have been obvious to one of ordinary skill in the art. However, since claims 6-8 depend from claim 1, the rejection suffers from the same deficiency as the rejection of claim 1 from which these claims depend, i.e., that Beristain fails to disclose or suggest a nickel-based alloy diaphragm with a noble metal coating on its exposed side. Accordingly, the rejection of claims 6-8 is improper and should be withdrawn.

The Examiner has rejected claims 2 and 5 under 35 U.S.C. 103 as unpatentable over Beristain in view of an article entitled "Why Choose Pressure?"

The Examiner notes that the articles disclose the use of a diaphragm made of a C-276 nickel-based alloy and concludes that it would have been obvious to utilize such an alloy in the sensing device of Beristain. There is nothing in the combined teachings of the references, however, to suggest that it would have been obvious to one of ordinary skill in the art to apply a noble metal coating to a nickel-based alloy diaphragm. Note, for example, the comments in the "Why Choose Pressure?" article that Hastelloy C-276 has excellent chemical resistance properties and is particularly well-suited for the fusion and forming techniques used in the production of the diaphragm. In Beristain, the noble metal layer is employed "to provide electrical connection." Notice that Beristain also

suggests nickel as an alternative to gold for providing the electrical connection. Since the diaphragm in the "Why Choose Pressure?" article is already constructed of a nickel alloy, there is no reason apparent from the combined teachings of the references as to why a gold layer would also be beneficial. It is therefore apparent that the combination of references is improper so far as it is evidently based on the utilization of impermissible hindsight gained from applicant's own disclosure. Accordingly, the rejection of claims 2 and 5 is also improper and should be withdrawn.

The Examiner has rejected claims 3 and 11 under 35 U.S.C. 103 as unpatentable over Beristain in view of Hodate (U.S. 5,069,759). The secondary reference is cited as teaching a threaded end portion and an integral hex nut on a sensor head.

Claim 3 depends from claim 1 and is patentable for the reasons presented above.

Independent claim 11, in addition to the limitation noted above, also requires that the diaphragm be constructed of a nickel-based C-276 alloy with gold plating on an exposed side thereof. Accordingly, the arguments presented above in connection with claim 1 are equally applicable here and withdrawal of this ground of rejection is also requested.

The Examiner has rejected claim 4 under 35 U.S.C. 103 as unpatentable over Beristain in view of Hodate and the article "Why Choose Pressure?". Claim 4 depends from claim 1 and is patentable for the same reasons as presented above in connection with the deficiencies in Beristain, Hodate and the "Why Choose Pressure?" article.


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For all of the above reasons, it is respectfully submitted that all of the application claims are in condition for immediate allowance, and early passage to issue is requested.

In the event, however, any small matters remain outstanding, the Examiner is encouraged to telephone the undersigned so that the prosecution of this application can be expeditiously concluded.

Respectfully submitted,

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